

Research Interests and Activities:

- 1) Modern Materials Joining Processes, Welding Metallurgy Modelling, and New Weldability Methods
- 2) Advanced Materials and Processes: High-Temperature Alloys, Intelligent Materials and Nano-Particle Metal Matrix Composites-MMC
- 3) Surface Engineering and Metallurgy: Electroless Coatings, Plasma Nitriding, Thermal Spray, and Physical Vaporization Deposition-PVD

- 1) Welding Metallurgy and Lab.s
- 2) Welding Technology and Workshops
- 3) Heat Treatments and Lab.
- 4) Fundamentals of Corrosion and Oxidation
- 5) Materials Science and Engineering Materials
- 6) Advanced Welding Metallurgy

Research

International Journal Publications:

- 1) H.Naffakh, M.Shamanian, F.Ashrafizadeh, "A comparative evaluation of welding consumables for dissimilar welds between 310 austenitic stainless steel and Inconel 657", International Journal of ISSI, Vol. 4, 2007, No.1,2 pp.39-49.
- 2) H.Naffakh, M.Shamanian, F.Ashrafizadeh, "Influence of artificial aging on microstructure and mechanical properties of dissimilar welds between 310 stainless steel and Inconel 657", Metallurgical and Materials Transaction A, Vol. 39, 2008, pp. 2403-2415.
- 3) H.Naffakh, M.Shamanian, F.Ashrafizadeh, "Interface and HAZ features of dissimilar welds between 310 austenitic stainless steel and Inconel 657" International Journal of ISSI, Vol. 1, 2008, No.1,2 pp.22-30.
- 4) H.Naffakh, M.Shamanian, F.Ashrafizadeh, "Weldability in dissimilar welds between Type 310 austenitic stainless steel and Alloy 657", Journal of Material Science, Vol. 43, 2008, pp. 5300-5304.
- 5) H.Naffakh, M.Shamanian, F.Ashrafizadeh, "An Evaluation of Thermal Stability in Dissimilar Welds between 310 Stainless Steel and Alloy 657", Iranian Journal of Materials Science and Engineering, Vol. 5, 2008, No. 3, pp.8-18.
- 6) H.Naffakh, M.Shamanian, F.Ashrafizadeh, "Dissimilar welding of AISI 310 austenitic stainless steel to nickel-based alloy Inconel 657", Journal of Materials Processing Technology, Vol. 209, 2009, pp. 3628-3639.
- 7) H.Naffakh, M.Shamanian, F.Ashrafizadeh, "Microstructural evolutions in dissimilar welds between AISI 310 austenitic stainless steel and Inconel 657", Journal of Materials Science, Vol. 45, 2010, pp. 2564-2573.

- 8) H.Naffakh Moosavy, M.R. Aboutalebi, S.H. Seyedein, “An analytical algorithm to predict weldability of precipitation-strengthened nickel-base superalloys”, Journal of Materials Processing Technology, Vol. 212, 2012, pp. 2210-2218.
- 9) H.Naffakh Moosavy, M.R. Aboutalebi, S.H. Seyedein, Carlo Mapelli, “Microstructural, Mechanical and Weldability Assessments of the Dissimilar Welds between γ' - and γ'' -Strengthened Nickel-Base Superalloys”, Materials Characterization, Vol. 82, 2013, pp. 41-49.
- 10) H.Naffakh Moosavy, M.R. Aboutalebi, S.H. Seyedein, Carlo Mapelli, “A Solidification Model for Prediction of Castability in the Precipitation-Strengthened Nickel-based Superalloys”, Journal of Materials Processing Technology, Vol. 213, 2013, pp. 1875-1884.
- 11) Homam Naffakh Moosavy, Mohammad-Reza Aboutalebi, Seyed Hossein Seyedein, Carlo Mapelli, “A New Approach for Assessment of the Weldability in the Precipitation-Strengthened Nickel-base Superalloys”, International Journal of Mineral, Metallurgy and Materials, Vol. 20, Number 12, 2013, pp. 1183-1191.
- 12) Homam Naffakh Moosavy, Mohammad-Reza Aboutalebi, Seyed Hossein Seyedein, Carlo Mapelli, Silvia Barella, “Modern Fiber Laser Beam Welding of the Newly-Designed Precipitation-Strengthened Nickel-base Superalloys”, Optics and Laser Technology, Vol. 57, 2014, pp. 12-20.
- 13) Homam Naffakh Moosavy, Mohammad-Reza Aboutalebi, Seyed Hossein Seyedein, Carlo Mapelli, “Microstructural, Mechanical and Weldability Evaluations in the Dissimilar Welding of Inconel 718 to Udimet 500 superalloys ”, Materials Science and Technology, Vol. 30, Number 3, 2014, pp. 339-347.

Referee of the International Journals and Conferences:

- 1) Journal of Materials Processing Technology
- 2) Materials Research
- 3) Materials Characterization
- 4) 2,3rd Global Conference on Materials Science and Engineering (CMSE 2013,2014)
- 5) Materials Science and Technology